AMENDMENTS TO THE SPECIFICATION

Paragraphs at page 13, line 1 to page 14, line 16:

Fig. 4 is a schematic block diagram showing the overall arrangement of a multi-user serial interference canceller according to an embodiment of the present invention. A radio reception signal spread with a spread code is input to an antenna 11 and then to a variable gain amplifier 13 via an RF amplifier 12. The level of the reception signal is converted into an appropriate level. A frequency converter 14 converts the reception signal into a baseband signal. The baseband signal is input to an A/D converter 15. The reception signal converted into a baseband digital signal by the A/D converter 15 is input to an interference canceller/demodulator unit 16. A level detector 18 detects the level of the signal prior to the input to the A/D converter 15. A feedback signal is input to an AGC controller 19. A reception quality collector [[18]] 17 collects the reception quality of the interference canceller/demodulator unit 16 on the basis of this embodiment. The collection result is input to the AGC controller 19 for feedback control.

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Fig. 5 is a detailed block diagram showing the main part of the interference canceller/demodulator unit 16 of this embodiment. The multi-user interference canceller in Fig. 5 has the main part identical to that shown in Fig. 2. Reference numeral 21 denotes a baseband reception signal demodulated by the former-stage RF demodulator and ~~A/D-converted~~ A/D-converter; 22, an ICU (Interference Canceller Unit) for generating and cancelling interference replicas; 23, an adder for adding the interference replica components of all users; 24, a delay memory for delaying and holding reception signals; 25, a subtractor for subtracting (cancelling) the interference replica components from the reception signals; 26, a

line for transmitting the interference replica signal of a given user to the next stage of the given user; 27, an adder for adding the (interference) replica signal of the previous stage of the given user again (the signal components of the first stage of all users are already subtracted); and 28, a decoder for outputting a final decoded signal. The operations and functions of the respective units except units 22 (as further described below with respect to Fig. 6) in the above arrangement are the same as those described with reference to Fig. 2, and a detailed description thereof will be omitted.

Paragraphs at page 16, line 17 to page 18, line 1:

Referring to Fig. 6, each ICU 22 in Fig. 5 is arranged as follows. A reception signal inputted is a baseband reception signal 21 for the first stage. The reception signals for the second and subsequent stages are output reception signals 31 ($r_{(t)}$) from the adders 27 of the previous stages. Each ICU 22 is comprised of a multiplier 32, integrator 33, transmission line estimator 34, multiplier 35, RAKE combiner 36, discriminator 37, multiplier 38, and ~~repreader~~ respreader 39. The multiplier 32 despreads the input with a spread code $Ck_{(t)}$. The integrator 33 integrates outputs from the multiplier 32 to calculate the correlation. The transmission line estimator 34 extracts the transmission line characteristics of a despread signal. The multiplier 35 multiplies an output from the integrator 33 with the complex conjugate of the transmission line characteristics. The RAKE combiner 36 combines the signals of the paths. The discriminator 37 discriminates the output from the RAKE combiner 36. The multiplier 38 adds the transmission line characteristics to the output from the discriminator 37 again. The ~~repreader~~ respreader 39 respreads the output from the multiplier 38 with the spread code $Ck_{(t)}$

again and outputs the result to the next stage. Note that the transmission line estimator 34 also measures the Eb/No.

A reception characteristic comparison controller 311 receives Eb/No information measured by the transmission line estimator 34. The reception characteristic comparison controller 311 compares the Eb/No value measured by the transmission line estimator 34 with an Eb/No value (reception characteristic data) 210 measured and sent by the preliminary demodulation stage. As a result of comparison, if it is determined that the characteristics are not greatly improved upon the interference cancellation processing, a control signal ~~313~~ 211 is output.